

## REMARKS

Claims 164-221 are pending.

### I. PATENTABLE SUBJECT MATTER

Applicants gratefully acknowledge the indication by the Examiner that claims 170, 178-181, 188, 196, 197, 205 and 217 recite patentable subject matter. In view of the remarks herein, it is believed that claims 170, 178-181, 188, 196, 197, 205 and 217 are in condition for allowance.

### II. ELDER AND/OR MEADOR AND/OR ANG?

The Office Action mailed June 16, 2006 ("the Office Action") is ambiguous as to the basis for the obviousness rejection. At first glance, it appears that the Examiner is rejecting claims 164-169, 171-177, 182-187, 189-195, 198-204, 206-216 and 218-221 based on an obviousness rejection of Meador in Ang. However, the analysis throughout suggests that the Examiner is using Elder as a basis for an obviousness rejection.

Is the obviousness rejection based on Meador in view of Ang?

Is the obviousness rejection based on Elder in view of Ang?

Is the obviousness rejection based on Meador in view of Ang and Elder?

Unfortunately, the ambiguity continues throughout the entire Office Action.

It is respectfully requested that the Examiner provide a corrected Office Action to which Applicants may adequately respond.

### III. PRIMA FACIE CASE OF OBVIOUSNESS

M.P.E.P. § 2142 states that "[t]he examiner bears the initial burden of factually supporting any prima facie conclusion of obviousness. If the examiner does not produce a *prima facie* case, the applicant is under no obligation to submit evidence of nonobviousness". M.P.E.P. § 2142 at page 2100-133.

Firstly, Applicants respectfully submit that the Examiner has not produced a *prima facie* case of obviousness in the Office Action since the Office Action does not even properly set forth

the basis for the obviousness rejection. Is it Meador in view of Ang? Is it Meador in view of Ang and Elder? Is it Elder in view of Ang?

Secondly, the Examiner states that “[h]owever, Elder et al does not specifically disclose the feature of a phase detector having a first input coupled to the mixer output”. Office Action at page 2.

In a *prima facie* case of obviousness, in view of the Examiner’s allegation as to the teaching deficiencies of Elder, Applicants would expect Ang to make up for the teaching deficiencies of Elder.

On page 3 of the Office Action, the Examiner presumably intended to allege that Ang makes up for the teaching deficiencies of Elder which, according to the Examiner, is a phase detector having a first input coupled to the mixer output.

Applicants must respectfully point out to the Examiner that **the Examiner’s analysis of Ang does not even mention a phase detector**. So how does Ang make up for the Examiner’s alleged teaching deficiencies of Elder? Should not a *prima facie* case of obviousness at least explain how Ang makes up for the teaching deficiencies of Elder?

Furthermore, Applicants must respectfully point out to the Examiner that **Ang does not even mention a phase detector**. The Examiner is encouraged to do a word search of Ang. He will find that Ang does not even mention a phase detector.

So how can the Examiner possibly assert that Ang teaches “a phase detector having a first input coupled to the mixer output” as set forth in claim 164?

If Ang does not even mention a phase detector and the Examiner’s analysis does not mention a phase detector, then how can Ang possibly teach “a phase detector having a first input coupled to the mixer output” as set forth in claim 164 which is alleged by the Examiner to be the teaching deficiency of Elder?

Since Ang does not make up for the Examiner’s admitted teaching deficiency of Elder, the Examiner has not even presented a *prima facie* case of obviousness with respect to claim 164.

The same or similar arguments can be made with respect to the other independent claims. Accordingly, it is respectfully submitted that the Examiner has not presented a *prima facie* case

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of obviousness with respect to claims 164-169, 171-177, 182-187, 189-195, 198-204, 206-216 and 218-221.

**IV. FURTHER ARGUMENTS: "SUBSAMPLING MIXER"**

Independent claim 182 recites, in part, "a subsampling mixer".

None of Meador, Elder and Ang even mentions a "subsampling mixer".

Applicants respectfully submit that the Examiner has failed to present even a *prima facie* case of obviousness with respect to independent claim 182 and its rejected dependent claims (i.e., claims 183-187, 189-195 and 198).

It is respectfully submitted that claims 183-187, 189-195 and 198 are in condition for allowance.

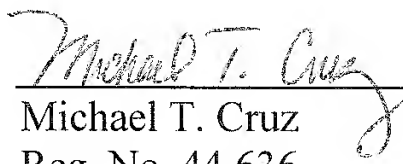
**V. CONCLUSION**

In view of at least the foregoing, it is respectfully submitted that the pending claims 164-221 are in condition for allowance. Should anything remain in order to place the present application in condition for allowance, the Examiner is kindly invited to contact the undersigned at the below-listed telephone number.

Please charge any required fees not paid herewith or credit any overpayment to the Deposit Account of McAndrews, Held & Malloy, Ltd., Account No. 13-0017.

Dated: October 16, 2006

Respectfully submitted,

  
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